City of Edmonton

HOUSING MARKET REPORT 1988

PLANNING AND
BUILDING DEPARTMENT
June, 1988

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INTRODUCTION

This report is an examination of the present and future Edmonton housing market. Within the study, there is a focus on projections and market activity, all in relation to the City's interest in housing and residential land development.

This report has two purposes:

- to provide a consistent analysis and forecast of housing activity for use within the City of Edmonton civic administration;
- to provide housing related data to the development and building industry.

KEY FINDINGS

The new and resale housing market in Edmonton improved substantially in 1987 and forecasts indicate a continuing increase in new housing construction. The major findings of the report are presented below:

Housing Demand (1988 - 1991)

- The young adult group (20-24) will decline by 20,000 reducing demand for apartment housing.
- Growth in adult age groups will support further demand for more expensive housing and specialized housing for older age groups.

New Housing and Land Supply

- Housing starts totalled 2,366 in 1987, up 24% from 1986.
- There is a small supply of serviced single family lots. At the end of 1988, the forecasted supply is 1.1 years.

Real Estate and Rental Market

- 1987 was the best year since 1982 for the real estate market. The sales to listings ratio increased to 54% and selling prices increased nearly 4%.
- Housing is affordable in Edmonton. Nearly 50% of Edmonton households can afford a suburban bungalow.
- Apartment vacancy rates increased to 6.8% in April 1988 This increase is due mainly to the continued trend towards home ownership and the decrease in the young adult age group.

Housing Starts Forecasts

- The forecast is for a continued increase in housing starts from 2,600 in 1988 to 3,400 in 1991.
- Housing starts will be concentrated in the west, southwest and southeast sectors of the city.

PART 1 - HOUSING DEMAND

Among the most significant variables affecting the demand for housing are demographic factors including population, age structure and household changes. This part of the report discusses these variables, examines household formation trends and provides a forecast of the expected number of households and associated housing requirements as they are influenced by economic conditions.

1.1 Population Projections

The population growth rate to 1991 is forecasted to be approximately 1.1% per year giving a 1991 population of 602,000 (see Table 1.2). This forecasted rate of increase is slightly higher than the 0.9% average yearly increase over 1982 - 1987 .

The small increase in the population growth rate results from forecasts of positive net migration over 1990 - 1992 compared with negative net-migration over 1982 - 1987 (Planning and Building Department, 1988):

1988	-1,600
1989	0
1990	1,100
1991	1,600

1.2 Age Distribution

The population age distribution is important from a housing perspective because different age groups generally have differing housing requirements. Young adults in the 20 - 24 age group generally seek rental accommodation, while persons in the family formation years of 25 - 34 are usually in search of their first home purchase. Persons in the middle years from 35 to 54 traditionally consider a move-up in housing quality, while the 55 + groups can be "empty-nesters", seniors looking for specialized accommodation, or be non-movers (Gruen, et al, 1982, p. 17).

The four years 1988 to 1991 will see a continuation of the aging trend evident in the years 1982 - 1987 (see Table 1.2):

20 - 24	The young adult group decreases by 20,000.
25 - 34	The family formation group increases by 8,000.
35 - 54	The middle years group increases by 20,000.
55 +	This group increases by 9,000.

These changes in the age distribution of the population, assuming no significant economic changes, would have the following impacts on housing:

- the decline in the 20-24 age group would continue the generally soft rental market;
- the growth in the 25-34 age group would provide demand for the first-time buyer market;
- the strong growth in the 35-44 group would suggest that the move-up market has the potential for further demand increases; and

- the growth in the 55+ age group would create an ongoing demand for seniors housing.

However, as discussed below and in Section 1.3, economic conditions are expected to significantly influence these demographic considerations.

1.3 Future Household Changes

The relationship between the population/age profile and household formation can be explored by a technique which calculates the likelihood that individuals in particular age groups are the head of a household (headship rates).

A study of household formation and headship rates in Canada (Smith, 1984), found that the large increase in the number of households since 1961 was due mainly to increases in non-family households (single-person households and households of unrelated persons). This growth of non-family households was facilitated primarily by an increasing real affordability and availability of housing. Other influencing factors include an increase in the numbers of young adults and social trends such as the increase in divorce rates. Economic variables were found to influence housing demand of all age groups but were of particular impact on the youngest age group (15-24).

In view of these conclusions on the relationship between economic variables and headship rates, the City's recent economic forecasts are significant (City of Edmonton, Forecast Committee, May 1988). The key findings of the forecasts are:

- Growth of the Alberta economy over 1988-1991 will average 3.9% per year compared to 1.4% over 1982-1987.

- Edmonton's unemployment rate will average 9.7% over 1988-1991 compared to 11.5% over 1982-1987.

- Real interest rates (prime rate minus consumer price increases), over 1988-1991 will average 5%. The rates were even higher at 6.6% over 1982-1987.

Improved economic growth, reductions in the unemployment rate, the continuation of a high rate of family separation, and the availability of a large supply of affordable housing are expected to contribute to an increase in the rate of family formation over the next several years.

These expectations are incorporated in the age-specific headship rates as projected in Appendix 1. The key features of the forecasts include:

- In the period 1988 to 1989, approximately 5,200 new households will be formed.

- In the period from 1989 to 1991 there will be an increase of approximately 5,500 households per year, and household size will decline to 2.42.

Period	Average Number of New Households Per Year
1982 - 1987	3,900
1988 - 1989	5,200
1989 - 1991	5,500

The household formulation projections from Table 1.3 and Appendix 1 are combined with an assessment of economic factors to prepare the housing starts forecast in Section 4.

Table 1.1

City of Edmonton, Population 1982 - 1991

Year	Population	Increase	Percentage Increase
1982	551,314		
1983	560,085	8,771	1.6
1984	563,000	3,915	0.8
1985	567,773	4,773	0.8
1986	571,506	3,733	0.6
1987	576,249	4,743	0.8
1988	580,830	4,581	0.8
1989	587,090	6,260	1.1
1990	594,487	7,397	1.2
1991	602,381	7,894	1.3

Source: 1982, 1983, 1986, 1987 Civic Census, City of Edmonton
1984-1985, Planning and Building Department, Estimates
1988-1991, Planning and Building Department, May 1988

Table 1.2

City of Edmonton, Population Projection and Age Distribution, 1982-1991

Age Group	Observed [1]				Projected [2]			
	1982		1986		1987		1991	
	Population	%	Population	%	Population	%	Population	%
0 - 14	106,085	19	116,344	20	118,804	21	127,972	21
15 - 19	43,461	8	40,678	7	40,063	7	33,746	6
20 - 24	78,441	14	68,334	12	64,285	11	44,490	7
25 - 34	123,651	23	129,043	23	129,368	22	137,503	23
35 - 44	66,054	12	74,635	13	77,735	14	98,205	16
45 - 54	52,913	10	52,567	9	53,620	7	58,633	10
55 - 64	40,923	7	44,933	8	45,491	8	48,117	8
65 +	39,786	7	44,972	8	46,883	8	53,719	9
TOTAL	551,314	100	571,506	100	576,249	100	602,381	100

[1]Source: Civic Census, City of Edmonton, various years
[2]Source: Corporate Forecasting Group, Planning and Building Department, City of Edmonton, 1988

Note: Totals may not add as a result of rounding.

Table 1.3

City of Edmonton, Household Growth, 1982-1991

Age Group	Observed 1982 Population	Headship Rate	Households[1]	Observed 1987 Population[1]	Headship Rate	Households[1]	Projected 1991 Population	Headship Rate	Households
15 - 24	121,902	.205	30,161	104,348	.235	24,522	78,236	.235	18,385
25 - 34	123,651	.530	63,509	129,368	.541	69,988	137,503	.544	74,802
35 - 44	66,054	.575	36,998	77,735	.582	45,242	98,205	.588	57,745
45 - 54	52,913	.593	29,757	53,620	.600	32,172	58,633	.605	35,473
55 - 64	40,923	.594	23,661	45,491	.602	27,386	48,117	.607	29,207
65 +	39,786	.608	23,649	46,883	.609	28,552	53,719	.609	32,715
TOTAL	445,229	.468	208,400[1]	457,445	.498	227,861	474,413	.523	248,326

Source: City of Edmonton, Planning and Building Department, 1988

[1]Approximate households based on actual population figures.

PART 2 - HOUSING SUPPLY

This part of the report outlines housing supply components including existing housing stock, new housing additions, housing absorptions, residential demolitions, units under construction, residential land supply and servicing activity.

2.1 Housing Stock

The growth rate in households over 1982 - 1987 (+9%) has been in excess of the population increase (+4.5%), reflecting the trend towards smaller households in Edmonton.

- The total number of housing starts over 1982 - 1987 in Edmonton was 22,161; most of these starts occurred in 1982 and 1983 (Table 2.1).
- Total starts over 1982-1987 were comprised of 56% single family starts, 10% row housing units and 34% apartment units.
- Figure 1 shows that residential housing starts have fluctuated considerably from year to year both in quantity and type.

2.2 New Housing Starts

Housing starts in 1987 totaled 2,366, (2,161 single units, 129 new row house units and 76 apartment units), a 24% increase from the 1986 total (Table 2.1). Housing starts were more evenly distributed in 1987 than in 1986 when activity was concentrated in the north, west and southwest sections. In 1987, the inner city and the southeast substantially increased their share, while the north sector's share dropped (Table 2.2).

2.3 Residential Demolitions

A number of housing starts can be considered as replacement stock for residential demolitions.

- Between 1982-1987 demolitions totaled 1,682 units or 280 units per year average, with 66% single family units.
- Demolitions in 1987 totaled 295 units, 66% of which were single family units.

2.4 Housing Units Under Construction

The number of units presently under construction indicates the volume of units which will soon be on the market.

- Total units under construction in April 1988 was 753 (679 single family, 48 row house units, and 26 apartment units). This figure has been constantly declining from a high of 7,700 units in July of 1982 as a result of the rapid decline in the number of apartment units under construction and the lack of speculative building.

2.5 Residential Land Supply

The supply of vacant residential land in suburban areas is an important aspect of housing supply and is summarized in Table 2.4 (City of Edmonton, Planning and Building Department, 1987). City sectors are shown on Map 1.

One of the critical aspects of residential land supply is the supply of subdivided and serviced lots for single family units.

- There is a supply of 3,625 of serviced, single family lots city-wide.
- The supply of subdivided and serviced lots for single family units ranges from 298 - 1,340 units in the various city sectors, while serviced land for multiple family housing (measured in units), ranges between 584 units and nearly 8,000 units.
- In addition to the serviced land supply, there is a large amount of unserviced, unsubdivided land in approved and authorized Area Structure Plans. This supply can accommodate 71,000 single family lots. On a sectoral basis, the supply ranges from 6,800 lots in the northeast to 18,000 lots in the west. This unserviced land is sufficient for 47,000 multiple family units. On a sectoral basis, the supply ranges from 4,600 units in the northwest to 15,300 units in the north.

2.6 Residential Servicing

In addition to the supply of subdivided and serviced lots specified in Table 2.4, a number of lots for single family units are serviced each year.

- In 1987, 1,335 single family lots were serviced compared to 1,285 in 1986.
- The 1987 servicing was distributed as follows: north (11%), west, (26%), southwest lot, (40%), southeast, (15%), and northeast, (8%).
- In 1988, approximately 2,000 single family lots are expected to be serviced. The servicing is expected to be distributed as follows: the west (38%), the southwest (29%), the southeast (8%) and the north (25%).

Table 2.1

City of Edmonton, Housing Starts 1982 - 1987

	Single Family		Row Housing		Apartments		Total	
Year	Units	%	Units	%	Units	%	Units	% Change Over Year Previous
1982	1,811	20	1,350	15	5,950	65	9,111	-13
1983	3,003	59	682	14	1,371	27	5,056	-44
1984	1,750	93	116	6	11	1	1,877	-63
1985	1,890	96	21	1	59	3	1,970	+5
1986	1,813	95	90	5	7	0	1,910	-3
1987	2,161	91	129	6	76	3	2,366	+24
TOTAL	12,428	56	2,259	10	7,474	34	22,161	

Source: Canada Mortgage and Housing Corporation.

Table 2.2

Housing Starts by City Sector, 1985 - 1987

Sector	1987	%	1986	%	1985	%
Northeast	89	4	80	4	74	4
North	363	15	478	26	530	27
West	492	21	456	24	593	30
Southwest	580	24	525	27	541	27
Southeast	439	19	247	13	154	8
Inner City	403	17	124	6	78	4
TOTAL	2,366	100	1,910	100	1,970	100

Source: Planning and Building Department

Table 2.3

City of Edmonton, Residential Land Supply[1] (in units)

City Sector (see Map 1)	(1) Subdivided and Serviced[1]	(2) Total Subdivided	(3) Approved ASPs[2] (Unserviced, Unsubdivided Land)	(4) Authorized ASPs (Unserviced, Unsubdivided Land	(5) Total
Northeast					
Single Family	298	354	6,780	0	7,134
Row Housing	1,240	1,240	2,308	0	3,548
Apartments	1.073	1,073	2,297	0	3,370
Total	2,611	2,667	11,385	0	14,052
North					
Single Family	384	384	16,014	0	16,398
Row Housing	270	270	8,044	0	8,314
Apartments	314	314	7,478	0	7,792
Total	968	968	31,536	0	32,504
West					
Single Family	670	670	1,186	17,076	18,932
Row Housing	636	636	590	5,260	6,486
Apartments	2,127	2,127	590	4,835	7,552
Total	3,433	3,433	2,366	27,171	32,970
Southwest					
Single Family	933	977	3,932	9,910	14,819
Row Housing	913	913	1,320	885	3,118
Apartments	1,606	1,606	1,619	3,191	6,416
Total	3,452	3,496	6,871	13,986	24,353
Southeast					
Single Family	1,340	1,340	10,172	5,677	17,189
Row Housing	1,277	1,277	3,473	1,235	5,985
Apartments	6,580	6,580	3,473	547	10,600
Total	9,197	9,197	17,118	7,459	33,774
Total (excluding Inner City)					
Single Family	3,625	3,724	38,084	32,663	74,471
Row Housing	4,336	4,336	15,735	7,398	27,469
Apartments	11,700	11,700	15,457	8,573	35,730
Total	19,661	19,760	69,276	48,636	137,670

Source: Planning and Building Department, Status of Residential Land Report, 1987

[1]Supply measured in potential dwelling units as of December 31, 1987.

PART 3 - MARKET TRANSACTIONS/OUTCOMES

A series of outcomes result from the interaction of the supply of housing and the demand by households. Key market transactions are outlined here.

3.1 Real Estate Listings and Sales

The volume of market transactions (listings and sales) are illustrative of the supply of and demand for housing. With the onset of recession in 1982, the number of listings increased while the number of sales dropped substantially, resulting in a sales to listings ratio of only 25% - a sharp decline from the 1981 figure of 41% (Table 3.1). Since 1982, the sales to listings ratio has risen markedly.

- 1987 was the best year for the residential real estate market since the recession in 1982. Total residential listings for 1987 were 16,101 and sales were 8,699 for a sales to listings ratio of 54% (up from 48% in 1986).

- House prices (measured by the average sales price of all dwelling units) increased for the first time since 1982. The increase in 1987 was $2,573 or 3.5% over 1986.

3.2 Rental Vacancy Rate

Rental vacancy rates rose dramatically in 1983 and 1984 but moderated in the last half of 1985 when the rate dropped to 4.4% in October. Since then, rates have increased to 6.8% in April 1988.

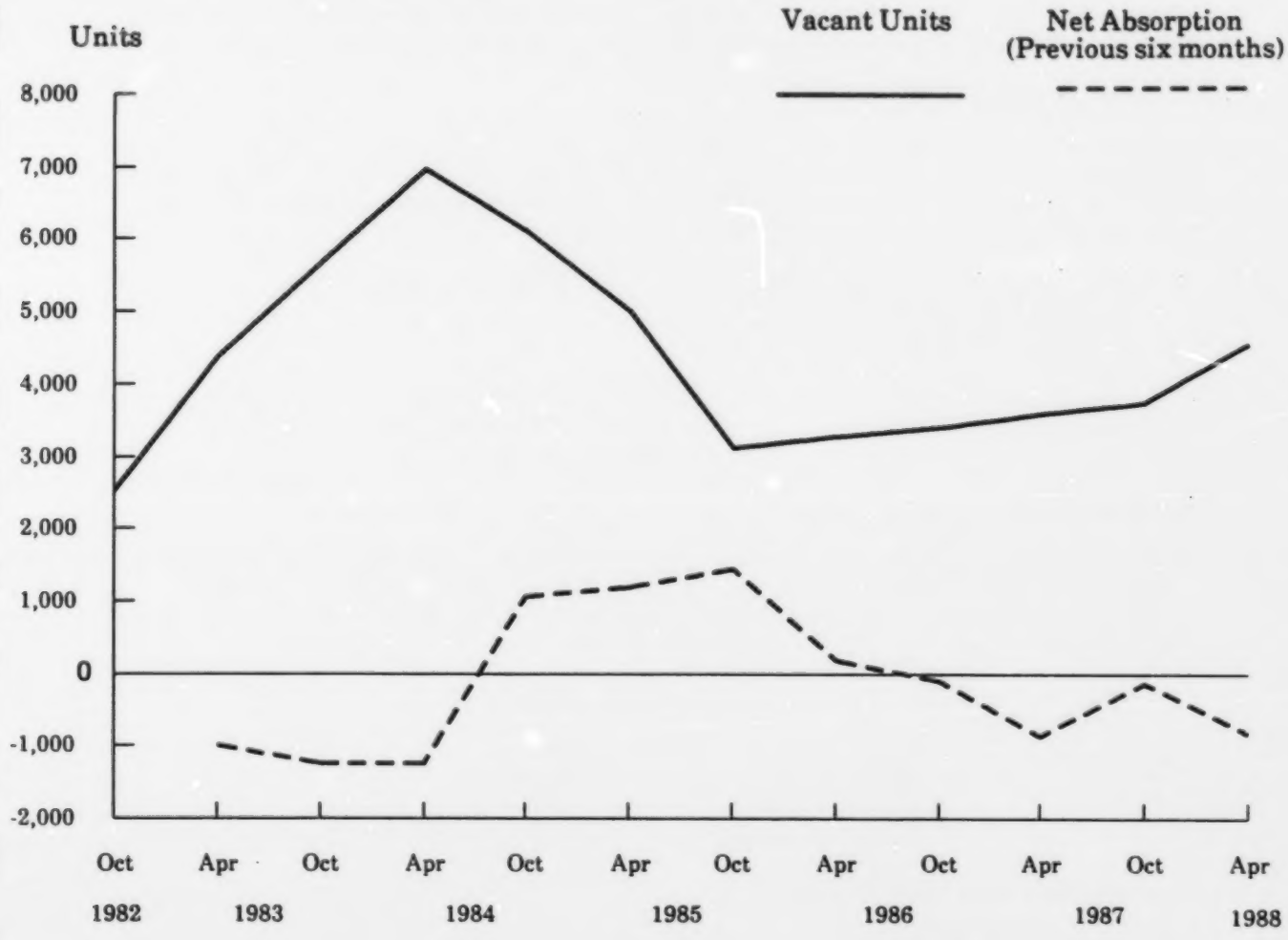
The vacancy rate varied greatly across the city in April 1988 from 3.9% in the university area and the southwest to a high of 11.1% in the north central area of the city. The rental vacancy rate also varied by apartment type:

	April 1988
Bachelor	9.0%
One Bedroom	6.9%
Two Bedroom	5.8%
Three Bedroom	4.9%

Vacancy rates fluctuated so markedly because of rapid changes in the demand for and supply of apartment units. Large numbers of new units entered the market in 1982 and 1983 when demand was dropping, and when demand began to rise in 1984, construction of new apartment units had virtually ceased. Net absorption of apartment units between April, 1984 and October, 1986 averaged about 115 units a month. However, between October, 1986 and April, 1988, about 100 apartment units a month in net terms have been vacated (Figure 1). The vacancy rate moved up in 1987 and 1988 in response to continued out-migration from Edmonton to other provinces, to decreases in the number of people in the 15-24 age group, and to a general movement of households from rental apartments to single family housing and row housing. Out-migration from Edmonton is still continuing in 1988 but the movement is from Edmonton to other centres in Alberta probably in response to increased resource activity. Given these trends, vacancy rates will probably average 6% in 1988.

Figure 1

Edmonton Apartment Vacancies and Absorption, 1982-1988



Source: CMHC and Planning and Building Department

3.3 Housing Costs

This section deals with the price of housing, both rental and ownership, the carrying costs of ownership and the relative affordability of housing compared to income.

Price of Ownership Housing

Table 3.3 shows the fluctuation in sales prices for two typical houses in Mill Woods between 1978-1988 (Royal LePage, Survey of Canadian House Prices). Mill Woods was chosen because of data availability and because the houses represent typical Edmonton homes in the average price range. The Royal LePage data shows:

- The price of a detached bungalow peaked at $90,000 in 1982, and then declined by 22% to $70,500 in in January of 1985. Since then, prices have increased, reaching $84,000 in April 1988.

- The price of the more spacious detached two storey home peaked in 1981, then declined by 26% to $95,000 in January, 1985. Since then, the price of this house type also increased, reaching $116,000 in April, 1988.

Apartment Rents

Rent for an average two bedroom apartment in the Edmonton area reached a high of $496 in 1982 (CMHC, Rental Vacancy Survey October, 1983). Rents for two bedroom apartments as of April, 1988 have declined to an average of $474 per month. The average rent for other apartment types were:

	April 1988
Bachelor	$311
One Bedroom	394
Two Bedroom	474
Three Bedroom	520

Ownership Carrying Charges

The cost of housing discussion provides additional insights when it is expanded to monthly carrying charges. Table 3.4 and Figure 5 illustrate expenses and carrying charges for the Mill Woods bungalow over 1982-1988. Carrying charges include the house price, 10% down payment, mortgage insurance, mortgage rates (5 year term) and taxes.

- Monthly carrying charges for a Mill Woods bungalow on April, 1988 averaged $859 per month.

- Carrying charges were highest in 1982 at $1,359 per month; since then carrying charges have fallen 37% to $859 per month.

- Carrying charges are very sensitive to interest rate fluctuations. With fixed house prices, down payment and taxes, a 1% change in interest rates causes carrying charges to increase or decrease by $53 per month on the sample house.

Affordability

This section deals with the cost of housing in relation to income. Data discussed includes median household income in Edmonton, the number of households that can afford different types of accommodation and average shelter costs.

Table 3.5 shows median household incomes in Edmonton and the Canadian consumer price index. Observations on the changes between 1980 and 1987 include:

- In nominal terms, median household income increased 20% to $32,760 in 1987.
- In real terms however, (accounting for inflation), median household income decreased by 15%.

A measure of affordability can be calculated by translating ownership or rental costs into yearly rates and assuming that 30% of the total gross income is spent on shelter. Using this procedure, the number of Edmonton households able to afford comfortably the shelter type can be calculated as follows:

- Monthly ownership costs of $859 (1988 costs, see Table 3.4), would require a household income of approximately $34,500. Nearly 50% of Edmonton households could afford a detached bungalow in Mill Woods.
- A two bedroom rental apartment costing $471 per month would require a household income of approximately $19,000; 70% of Edmonton households could afford this shelter.

These figures are approximate calculations; alternate housing preferences and financing arrangements provide a wide array of shelter financing options. Housing is also available in Edmonton at much lower prices in the form of town houses (Castle Downs, $50,000 or Mill Woods, $40,000) condominium apartments (Castle Downs, $15,000 or Clareview, $24,000) and rental walk-ups.

These shelter and financing options combined with available assisted housing and recently lower shelter costs make housing a generally affordable commodity in Edmonton.

3.4 City Sector Profile

Table 3.6 summarizes housing market activity for each of the six city sectors. Map 1 outlines the boundaries of the sectors. Highlights are:

- The change in average house prices over 1987-1988 ranges between 4% to 6%.
- Housing starts in 1987 show that the southwest sector had the most starts followed by the west and southeast sectors. This distribution continues the trend begun in 1983 that saw the focus of building activity move from the southeast towards the west, north and southwest.
- Residential servicing reflects the distribution of building activity. Most of the 1,335 single family lots serviced in 1987 were in the southwest (40%), west (26%) and southeast (15%) sectors of the city.

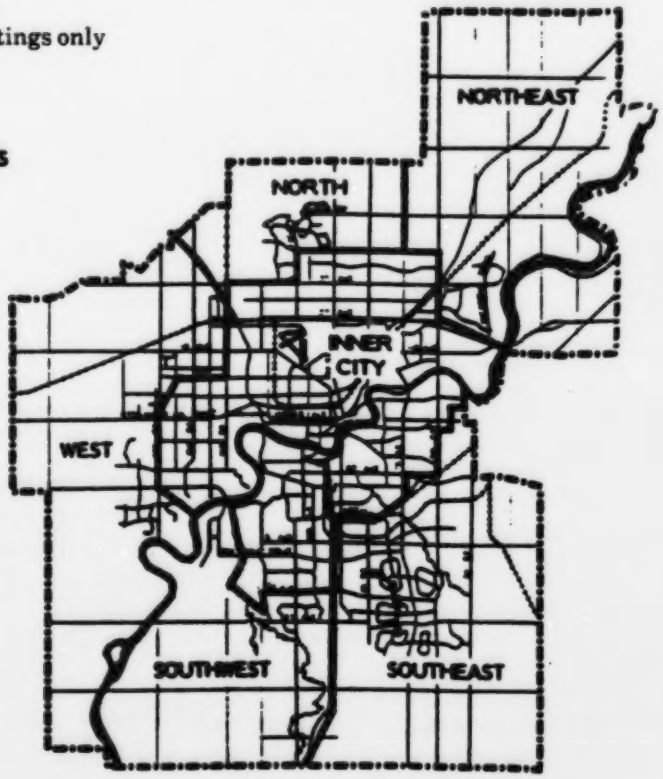
Table 3.1

City of Edmonton, Real Estate Listings and Sales, 1982-1987

Year	Total Listings	Total Sales	Sales to Listing Ratio (%)	Average Price ($)
1982	19,451	4,873	25%	91,405
1983	19,056	5,605	29%	85,667
1984	17,955	6,002	33%	79,306
1985	16,457	8,867	54%	74,175
1986	16,621	8,028	48%	74,305
1987	16,101	8,699	54%	76,878

Source: Edmonton Real Estate Board
"Multiple Listing Service" listings only

MAP I CITY SECTORS



SOURCE: General Municipal Plan Map 5.1

Table 3.2

Edmonton Rental Vacancy Rate, 1982-1988

Year	Month	Vacancy Rate (in percent)[1]
1982	April	3.4
	October	4.6
1983	April	7.5
	October	9.5
1984	April	11.4
	October	9.5
1985	April	7.4
	October	4.4
1986	April	4.5
	October	4.1
1987	April	5.5
	October	5.6
1988	April	6.8

Source: CMHC

[1] CMHC survey includes privately initiated buildings containing 6 units or more.

Table 3.3

City of Edmonton, Example House Prices (in current dollars)

		Detached Bungalow[1]	Detached Two-Storey[2]
1982	July	90,000	127,000
1983	July	79,000	115,000
1984	July	73,500	102,000
1984	October	72,000	98,000
1985	January	70,500	95,000
1985	October	75,500	105,000
1986	January	77,000	107,000
1986	April	81,000	110,000
1987	January	78,500	108,500
1987	April	79,500	108,500
1988	January	82,500	113,000
1988	April	84,000	116,000

Source: Royal LePage Survey of Canadian House Prices

[1]A 3-bedroom bungalow, with one car garage, 1½ bathroom and 111 sq. metres (1,200 square feet), 5-8 years old in Mill Woods.

[2]A 4-bedroom two-storey with two car garage, 2½ bathrooms, fireplace, family room and is 186 sq. metres (2,000 square feet), 5-8 years old in Mill Woods.

Table 3.4

City of Edmonton, Monthly Carrying Charges - Ownership

	1982	1983	1984	1985	1986	1987	1988
House Prices[1]	$90,000	$78,000	$73,500	$70,500	$81,000	$79,500	$84,000
Less 10% Downpayment	9,000	7,800	7,350	7,050	8,100	7,950	8,400
Mortgage Amount	81,000	70,200	66,150	63,450	72,900	71,550	75,600
High Ratio Insurance (@ 1.5%)	1,215	1,053	992	952	1,093	1,073	1,134
Total Mortgage Amount	82,215	71,253	67,142	64,402	73,993	72,623	76,734
Interest Rate[2]	19.25%	13.5%	15.25%	12.5%	11.0%	10.5%	11.25%
Monthly Payment[3]	$1,282	$811	$849	$688	$712	$674	$752
Taxes[4]	$77	$83	$83	$88	$100	$103	$107
Carrying Charge (per month)[5]	$1,359	$894	$932	$776	$812	$777	$859

[1]Royal Trust Survey of Canadian House Prices, (July for 1982 - 1984, April for 1985 - 1988) Mill Woods Detached Bungalow.
[2]5-Year term, (July for 1982 - 1984, April for 1985 - 1988).
[3]Amortized over 25 years.
[4]Assuming $1,236 annual taxes for 1988.
[5]Other costs such as utilities and maintenance are not included.

Table 3.5

City of Edmonton, Median Household Income 1980-1987

Year	Median Income (in dollars)[1]	% Change	Consumer Price Index[2]	% Change
1980	25,748	-	88.9	-
1981	-	-	100	12
1982	-	-	110.8	11
1983	-	-	117.2	6
1984	31,540	-	122.3	4
1985	32,440	2.8	124.3	3
1986	32,440	0.0	128.3	3
1987(e)	32,760	1	133.7	4

1 Income for 1980, 1984 - 1986 based on data supplied by statistics Canada.
1987 estimate based on the increase in average weekly earnings for Edmonton residents.

2 Statistics Canada, Annual Average Index, all itens

Table 3.6

City of Edmonton, City Sector Description of Housing Market Activity

Description	Inner City	Northeast	North	West	Southwest	Southeast
Average Price 1988[1] (April)	N/A	$77,000	$82,000	$88,000	$118,000	$84,000
Percentage Change 1987-1988	N/A	4.0	4	5	7	6
Housing Starts 1987						
Single/Semi	96	85	349	425	568	439
Row Housing	8	4	14	67	12	-
Apartments	7	-	-	-	-	-
Total	403	89	363	492	580	439
Share of 1987 housing starts	17%	4%	15%	21%	24%	19%
Vacant Single Lots[2]	N/A	298	384	672	933	1,340
Vacant Residential Land (Hectares)[3]	N/A	695	1,545	314	626	1,147
1987 Single Family lot servicing	-	106	147	354	530	198

1 Average price is for a single detached bungalow, Royal LePage survey of Canadian house prices .
2 Subdivided and serviced lots for single family residential units Status of Residential Land Report, 1987.
3 Raw land for residential purposes in authorized and/or approved Area Structure Plans.

PART 4 - FORECASTS

This part of the report presents housing forecasts and highlights key study findings and implications.

4.1 Housing Forecast

This report uses two methods to forecast housing starts:

(i) headship rates as influenced by economic forecasts (Section 1.3); and

(ii) an econometric model for forecasting housing starts (City of Edmonton, Planning and Building Department, 1987).

The two different methods are used because of their complementary nature. The headship method provides only a total starts forecast based on a combination of demographic and economic forecasts. The econometric model provides forecasts of total, multi-family and single family starts with a specific, quantified relationship to selected economic variables.

Based on a comparison of the forecasts from the two methods and a subjective assessment of the factors influencing housing starts, a preferred forecast is identified.

Method 1: Headship Rates Influenced by Economic Conditions

The headship rate forecasts discussed in Section 1.3 (and presented in detail in Appendix 1) provide the following forecast of household growth (rounded to the nearest 100):

Year	Increase in Households
1988	4,400
1989	5,200
1990	5,500
1991	5,400

Increases in the number of households though, will not result in an equivalent number of housing starts because a certain amount of household growth is accommodated by the existing housing market. Households (defined as an occupied dwelling unit) either rent or own housing and growth in the number of households will include both renter and owner households. Growth in renter households can largely be accommodated by the existing stock of apartments and other rental accommodation such as row housing and basement suites in houses. Increases in owner households, though, will require housing starts because there is virtually no inventory of vacant ownership housing.

A forecast of housing starts based on increases in the number of new households first requires an estimate of the number of new households that will rent housing and the number of households that will own housing. An estimate of the number of new households that will rent housing was derived using data from the City of Edmonton

Census. The number of housing starts expected as a result of growth in the number of households is outlined in the table below:

Year	Household Increase	Renter Households	Single Family Housing Starts
1988	4,400	2,300	2,100
1989	5,200	2,700	2,500
1990	5,500	2,850	2,650
1991	5,400	2,800	2,600

Method 2: Econometric Model for Housing Starts

The second method forecasts single family, multiple family and total starts based on causal relationships between housing starts and economic factors. An econometric model of the Edmonton economy (City of Edmonton, Planning and Building Department, 1986), forecasts selected economic variables including housing starts. A series of econometric equations were developed and tested to determine the degree to which selected economic variables explained housing starts activity.

The variables, which are described below, are also specified by the model:

i) total housing starts in Edmonton are largely determined by the current real mortgage rate, apartment vacancy rates from the previous year, and by real new house prices (from two years previous);

ii) single family starts are influenced most strongly by the real mortgage rate for the previous year, by changes in the current year's real price of new housing, and the inventory of newly-completed and unoccupied houses from the previous year; and

iii) multi-family starts were calculated as the difference between total starts and single family starts (City of Edmonton, Planning and Building Department, 1986).

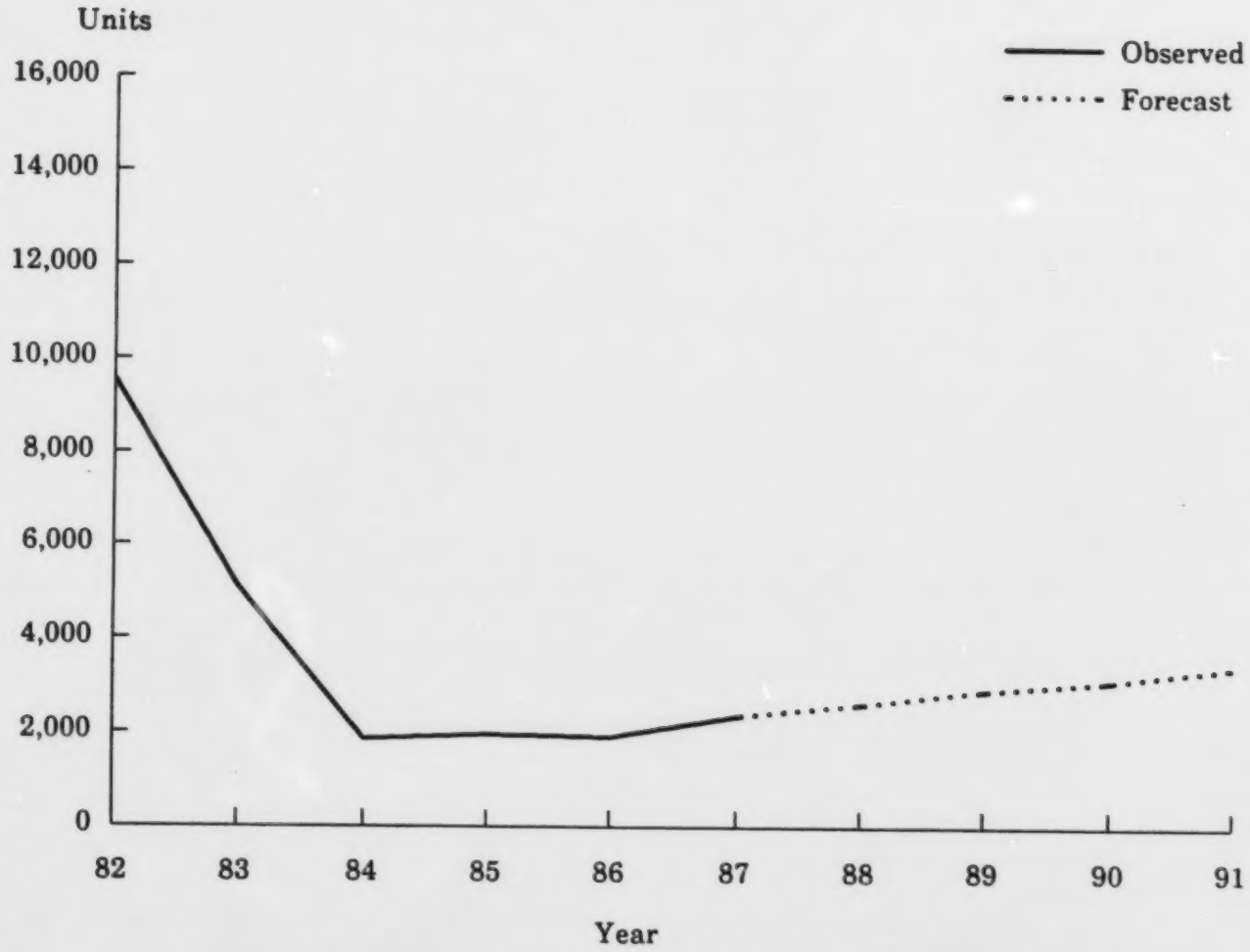
When the economic forecasts variables for Alberta and Edmonton (City Forecast Committee, 1988) are inserted into the econometric equations, the following forecasts resulted:

Year	Single Family Starts	Multi-family Starts	Total Starts
1988	2,365	146	2,511
1989	2,529	0	2,237
1990	2,414	637	3,051
1991	2,401	1,630	4,031

In examining the outputs from the econometric model, the growth in total starts appears reasonable. However, the rapid increase in multiple family starts and the corresponding lack of growth in single family starts appears unlikely. Demographic growth also influences housing starts and the household forecasts discussed earlier

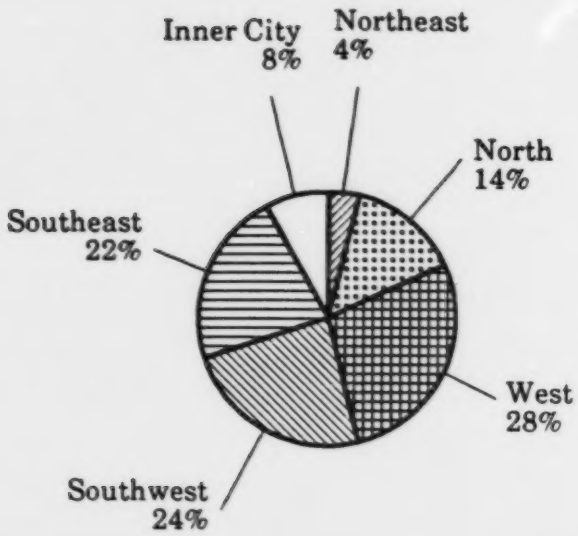
Figure 2

Housing Starts, 1982-1991



Source: Table 2.1 and Table 4.2

Starts Forecast
1988-1991



Source: Table 4.2

Figure 3

Distribution of Residential Building

Starts
1985-1987

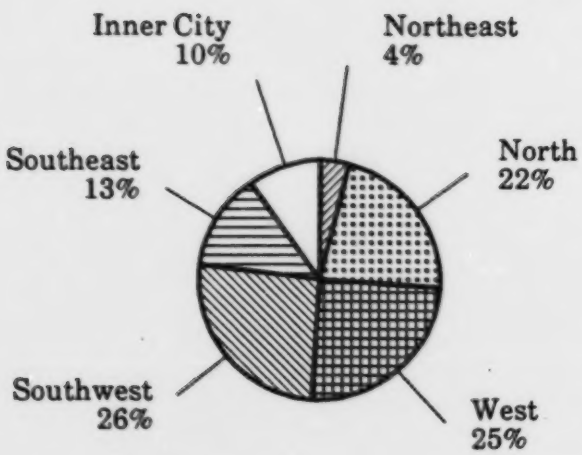
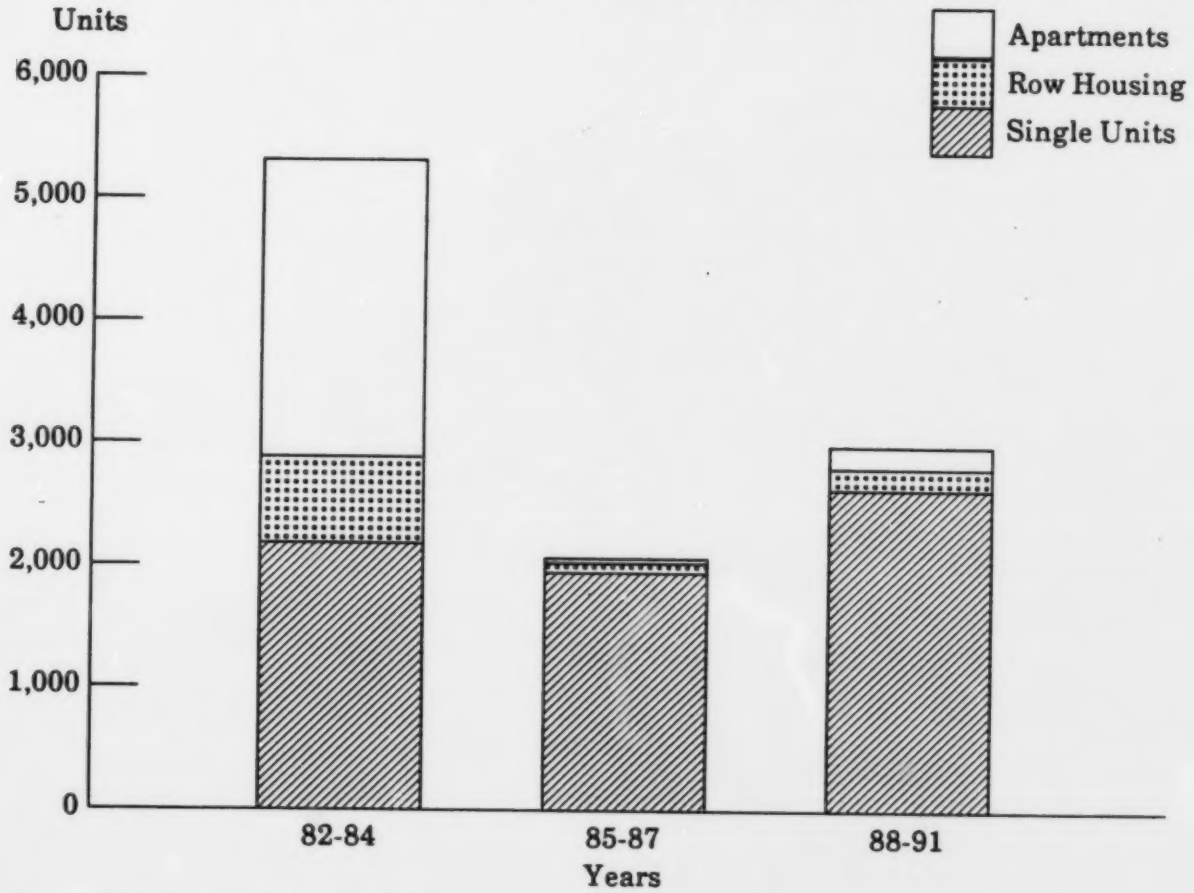


Figure 4

Average Housing Starts and Mix Per Year



Source: Table 2.1 and Table 4.2

indicate a weaker demand for apartment housing and greater demand for single family housing than indicated by the econometric model.

Preferred Housing Starts Forecasts

A preferred forecast of housing starts incorporating both demographic and economic variables is as follows (Table 4.1, Figure 2):

Year	Forecast	Rationale
1988	2,600	The positive factors are continuing lower mortgage rates, firmer oil prices and rising resale housing prices.
1989	2,900	The tone of the market starts to improve as economic growth continues. The unemployment rate declines slightly and net-migration is no longer negative.
1990	3,100	The continuation of economic growth and increasing positive migration increase housing starts.
1991	3,400	Stability of economic variables and continued household growth increase starts slightly.

4.2 Distribution of Housing Starts

Housing starts in the years 1985 - 1987 saw continuing high activity in the west and southwest sectors of the city. The inner city and the southeast had a large number of starts in 1987 after low activity in 1985 and 1986. The north sector's share dropped in 1987 while the northeast's share of starts remained at a low level. Activity is expected to be concentrated in the southwest, west and southeast areas of the city, with the southeast's share falling in the later period as the ready availability of serviced lots declines (Table 4.2, Figure 3).

There has also been a distinct shift away from apartment and ground related multiple starts to single family/semi-detached starts (91% of total starts in 1987). This emphasis is expected to continue in 1988 and 1989 with more apartments and ground related multiples appearing in the 1990 - 1991 period (Figure 4).

4.3 Residential Land Supply

The supply of serviced residential land at the end of 1988 (outlined in Section 2.6), is adequate to satisfy 1.1 years demand for single family units at 1988 forecasted absorption rates. The total supply of residential land (serviced and unserviced) in approved and authorized Area Structure Plans is sufficient to meet demand for single family units for over 20 years. The supply of serviced land for multi-family units is also in excess of 20 years supply.

4.4 Serviced Land Supply Forecast by Sector

At forecasted growth rates, the supply of subdivided and serviced lots for single family units in different sectors of the city ranges from 0.7 years in the north to 2 years in the northeast (See Table 4.3). This supply is adequate through 1988. At forecasted growth rates and present servicing rates, it can be expected that an increase in servicing rates in single family units will be required in the north, west and southwest sectors by 1989.

Table 4.1

City of Edmonton, Population and Housing Forecast, 1981-1991

Year (per Year)	Average Population Increase (per Year)	Household Increase	Housing Starts (per Year)
1981-1983	+19,000	7,400	8,227
1984 (est)	+2,900	1,786	1,877
1985 (est)	+4,800	1,899	1,970
1986	+5,004	1,700	1,800
1987	+4,743	3,446	2,366
1988 (forecast)	+4,581	4,400	2,600
1989 (forecast)	+6,260	5,200	2,900
1990 (forecast)	+7,398	5,500	3,100
1991 (forecast)	+7,894	5,400	3,400

Source: Planning and Building Department, 1988

Table 4.2

City of Edmonton, Housing Starts Forecast by City Sector and Type

Sector[1]	1985	1986	1987	1988	1989	1990	1991
Inner City	78	124	403	260	230	250	270
Northeast	74	80	89	100	115	125	135
North	530	478	363	365	405	435	475
West	593	456	492	625	755	900	1,050
Southwest	541	525	580	600	725	775	850
Southeast	154	247	439	650	670	615	620
Total	1,970	1,910	2,366	2,600	2,900	3,100	3,400
Housing Type							
Single Family	1,890	1,813	2,161	2,350	2,600	2,700	2,900
Row Housing	21	90	129	125	150	200	250
Apartments	59	7	76	125	150	200	250
Total	1,970	1,910	2,366	2,600	2,900	3,100	3,400

Source: Planning and Building Department, 1988

[1]Actual distribution for 1985 - 1987. Forecasted distribution for 1988 to 1991. See Map 1 for Sector definition.

Table 4.3

City of Edmonton, Inventory of Serviced Residential Land At the end of 1988 (in years)

City Sector	Year-end Supply 1988[1]	Supply of Subdivided and Serviced Lots in Years[2]
NORTHEAST		
Single Family	198	2
Row Housing	1,238	+20
Apartments	1,071	+20
NORTH		
Single Family	262	0.7
Row Housing	260	+20
Apartments	301	+20
WEST		
Single Family	824	1.3
Row Housing	372	+20
Apartments	2,349	+20
SOUTHWEST		
Single Family	601	1
Row Housings	865	+20
Apartments	1,591	+20
SOUTHEAST		
Single Family	936	1.4
Row Housing	1,314	+20
Apartments	6,575	+20

Source: Planning and Building Department, May 1987, Residential Land Report, 1987

[1]Calculated by taking the 1987 year end supply, adding 1988 forecasted servicing and subtracting 1988 forecasted housing starts.
[2]Calculated by dwelling type by dividing the potential units on subdivided and serviced lots by the forecast of housing starts by sector by type for 1988 (Table 4.2).

APPENDIX

City of Edmonton
Household Growth, 1983 - 1991

Age Group	1983 Population	1983 Headship Rate	1983 Households	1984 Population	1984 Headship Rate	1984 Households	1985 Population	1985 Headship Rate	1985 Households
15-24	123,106	0.235	28,930	115,727	0.235	27,196	110,838	0.235	26,047
25-34	123,318	0.533	65,728	125,616	0.535	67,205	127,158	0.537	68,284
35-44	66,663	0.575	38,331	69,231	0.577	39,946	71,958	0.579	41,664
45-54	52,668	0.593	31,232	52,350	0.595	31,148	51,903	0.597	30,986
55-64	41,149	0.594	24,443	42,831	0.596	25,527	44,309	0.598	26,497
65+	39,415	0.608	23,964	41,127	0.608	25,005	43,210	0.608	26,272
TOTAL	446,319	0.476	212,629	446,882	0.483	216,027	449,376	0.489	219,749
INCREASE				563		3,399	2,494		3,722

Age Group	1986 Population	1986 Headship Rate	1986 Households	1987 Population	1987 Headship Rate	1987 Households	1988 Population	1988 Headship Rate	1988 Households
15-24	109,012	0.235	25,618	104,348	0.235	24,522	96,446	0.235	22,665
25-34	129,043	0.539	69,554	129,368	0.541	69,988	133,040	0.541	71,975
35-44	74,635	0.581	43,363	77,735	0.582	45,242	81,878	0.582	47,653
45-54	52,567	0.599	31,488	53,620	0.600	32,172	54,441	0.600	32,665
55-64	44,933	0.601	27,005	45,491	0.602	27,386	45,972	0.602	27,675
65+	44,972	0.609	27,388	46,883	0.609	28,552	48,589	0.609	29,591
TOTAL	455,162	0.493	224,415	457,445	0.498	227,861	460,366	0.504	232,223
INCREASE	5,786		4,666	2,283		3,446	2,921		4,362

Age Group	1989 Population	1989 Headship Rate	1989 Households	1990 Population	1990 Headship Rate	1990 Households	1991 Population	1991 Headship Rate	1991 Households
15-24	89,259	0.235	20,976	82,910	0.235	19,484	78,236	0.235	18,385
25-34	135,968	0.542	73,695	137,541	0.543	74,685	137,503	0.544	74,802
35-44	86,533	0.584	50,535	92,284	0.586	54,078	98,205	0.588	57,745
45-54	55,769	0.601	33,517	57,042	0.603	34,396	58,633	0.605	35,473
55-64	46,506	0.604	28,090	47,258	0.606	28,638	48,117	0.607	29,207
65+	50,201	0.609	30,572	51,906	0.609	31,611	53,719	0.609	32,715
TOTAL	464,236	0.511	237,385	468,941	0.518	242,892	474,413	0.523	248,326
INCREASE	3,870		5,162	4,705		5,507	5,472		5,434

Source: Planning and Building Department, June, 1988

HOUSING DATA SOURCES

SOURCE	DATA
1. Canada Mortgage and Housing Corporation	Housing Statistics Report (Monthly) - housing starts, under construction, completions, absorption rates and inventory of newly completed and unoccupied units Rental Vacancy Survey (Semi-Annually) - rental vacancy rates and average rental prices
2. Statistics Canada	Census Data (Every 5 Years): - head of household by age cohort - family/non-family households New House Price Index (Monthly) - index of the price of new housing by land and building components
3. City of Edmonton	Status of Residential Land Report (Annually): - building permits issued - inventory of vacant lots at various stages of development by neighbourhood Edmonton Demographic Indicators 1987 (Periodically) - detailed population data for the 608 census enumeration areas - population projections including age distribution for Edmonton to the year 2001 - migration, birth and death rates Residential Population Densities in Edmonton (Periodically): - persons per dwelling unit data for each land use districts by unit type City Forecast Committee (Periodically) - forecast of major economic and social indicators for Edmonton and Alberta

An Edmonton Housing Market Model (Research Paper No. 10)

- an econometric model of housing starts in Edmonton

Residential Staging Information, (Annually)

- evaluates the supply of and demand for residential land by sector of the City

4. Gruen, et. al. — Demographic Changes and Their Effects on Real Estate Markets in the 1980's. Urban Land Institute, Washington, D.C., 1982.

5. Royal LePage — Survey of Canadian House Prices (Quarterly):

- average price data for several housing types in several neighbourhoods of Cities across Canada

6. Edmonton Real Estate Board — Multiple Listing Service Data (Monthly):

- detailed listings, sales price and sales type data for MLS

7. Lawrence Smith — 'Household Headship Rates, Household Formation, and Housing Demand in Canada' Land Economics, Vol. 60, No. 2, May, 1984